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### REMARKS/ARGUMENTS

Claims 1-21, 23, 25-40 were pending. The examiner rejected all claims. The applicants have canceled claims 2, 4, 7-10, 13, 18 and 35-40, amended claims 1, 17, 19 and 20, and added new claims 41-48. Thus, the pending claims are now claims 1, 3, 5-6, 11-12, 14-17, 19-21, 23, 25-34 and 41-47, which the applicants believe are patentable, as set forth in detail below.

#### §112, ¶ 2 Rejections

Claims 1-21, 23, 25-40 were rejected under 35 U.S.C. § 112, ¶ 2 as being indefinite. In particular, the examiner objected to the use of the term "substantial" in claims 1, 17 and 35 and suggested that the applicants recite the structural features that provide the listed function. The applicants have now amended claim 1 to include the structural feature of "an integrated circuit chip that forms a majority of the head suspension or head suspension component." The applicants have also amended claim 17 to include the structural feature that "the chip is a stiffening member extending lengthwise at least half of the head suspension or head suspension component." These amendments overcome the examiner's objections regarding the use of the word "substantial". The cancellation of claims 35-39 renders the rejection of those claims moot.

The examiner objected to the use of relative terms "enhance" in claim 18 and "reduce" in claims 19 and 20. The applicants canceled claim 18. The applicant further amended claim 19 to recite that "the chip is externally shaped to have an aerodynamic cross-sectional profile" and amended claim 20 to include "means for minimizing wind drag of the head suspension or head suspension component." The support for the features can be found at least at Figure 9 and the corresponding text portions of the specification. These amendments remove the relative terms and provide structural features to claims. The examiner's objections to the use of relative terms have therefore been overcome.

The examiner further cited the functional descriptions in claims 18, 19, 20 and 40 as reasons for the rejection of those claims and required the applicants to either recite structural features involved or utilize the "means plus function" format to invoke 35 U.S.C. § 112, ¶ 6.

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The applicants have canceled claim 18 and 40. As discussed above, the amendment to claim 19 added structural features, and claim 20 has been amended to include the "means plus function" language to invoke 35 U.S.C. § 112, ¶ 6. The defects that the examiner perceives have therefore been removed.

The applicants thus respectfully submits that the claim rejections under 35 U.S.C. § 112, ¶ 2 should be withdrawn.

#### **Art-Based Rejections**

The examiner rejected claims 1-13, 17, 18, 21, 23, 29, 30 and 35-40 under 35 U.S.C. § 102(a) as being clearly anticipated by U.S. Pat. No. 6,114,530 (the "*Shiraishi* '530 patent"). The applicants have canceled claims 2, 4, 7-10, 13 and 35-40 submit that the remaining claims, as amended, are not anticipated by *Shiraishi* '530 patent.

Independent claim 1 recites a head suspension or head suspension component comprising an integrated circuit chip "that forms a majority of the head suspension or head suspension component". The *Shiraishi* '530 patent does not teach these features. The load beam of the suspension shown in this patent is not described as being anything other than conventional in design. One embodiment is said to be 70-75  $\mu\text{m}$  in thickness for supporting the flexure along its whole length. The IC chip is mounted on the flexure near the distal end of the load beam. Nothing in the patent suggests that this IC chip forms the majority of the suspension or a component of the suspension. Claims 1 and 35 are therefore not anticipated by the *Shiraishi* '530 patent. Claim 3 5-6, 11-12, 17, 21, 23, 29, and 30, being ultimately dependent upon claim 1 and thus each including all the features of the respective base claims, are thus also not anticipated by the *Shiraishi* '530 patent.

The examiner rejected claims 1-10, 12, 13, 17, 18, 21, 23, 29, 30 and 35-40 under 35 U.S.C. § 102(a) as being clearly anticipated by U.S. Pat. No. 6,084,746 (the "*Shiraishi* '746 patent"). The applicants submit that the claims that have not been canceled, as amended, are not anticipated by *Shiraishi* '746 patent. The *Shiraishi* '746 patent discloses a suspension with an IC chip that is very similar to that shown and described in the *Shiraishi* '530 patent in that both disclose a small IC chip mounted near the tip of the loadbeam. This patent provides no teaching of a suspension or component having an IC chip that forms the majority of the

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suspension or a component of the suspension. The applicants therefore submit that claims 1, 3, 5-6, 12, 17, 19, 21, 23, 29 and 30 are not anticipated by the *Shiraishi* '746 patent.

It should be further noted that claims 1, 3, 5-6, 11-13, 17, 21, 23, 29 and 30 are not only not anticipated by either of the *Shiraishi* patents, but are also not obvious in light of the *Shiraishi* patents. A chip in accordance with the present invention provides substantial structural support to the head suspension or head suspension component and thereby provides several advantages. First, the chip can enhance the rigidity of a stainless steel load beam, which results in a better dynamic response. Second, the chip is less dense than stainless steel and provides these advantages with relatively little weight. Furthermore, this improved rigidity and lightness mean that the head suspension can be smaller than head suspensions constructed of all stainless steel or other materials.

These advantages are not provided or suggested by the disclosure in the either *Shiraishi* patent. As alluded to earlier, the load beam of the suspension shown in the *Shiraishi* patents is not described as being anything other than conventional in design. Neither is any IC chip described therein. In conventional designs that involve IC chips, it is typically desirable to have the sizes of IC chip as small as possible, in contrast to the invention, which uses IC chips of sufficient sizes to achieve the desired structural support for the head suspension. In view of these structural differences and the important advantages they provide, claims 1, 3, 5-6, 11-12, 17, 21, 23, 29 and 30 are not obvious in light of either *Shiraishi* patent.

The examiner further rejected claim 28 under 35 U.S.C. § 103(a) as unpatentable over the *Shiraishi* '530 or '746 patent. However, claim 28 depends on claim 1, which is patentable for the reasons provided above and therefore includes further features and advantages over prior art. The applicants therefore respectfully submit that claim 28 is patentable as well.

#### **Allowable Subject Matters**

The examiner noted that claims 14-16, 19, 20, 25-27 and 31-34 would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112 and to include all of the limitations of the base claim and any intervening claims. As discussed earlier, the applicants

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believe that the all previously pending claims, as amended, are patentable under 35 U.S.C. § 112. Further, claim 1 is patentable over prior art. Claims 14-16, 19, 20, 25-27 and 31-34 are therefore ultimately dependent upon an allowable claim and are allowable themselves.

**New Claims**

The applicants have added new claims 41-48 and believe the new claims to be patentable for at least the same reasons discussed above.

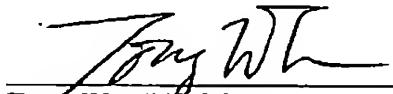
In conclusion, the applicant respectfully submit that claims 1, 3, 5-7, 11-12, 14-17, 19-21, 23, 25-34 and 41-47 are in condition for allowance and request a notice to that effect.

A payment for the additional claims is enclosed. Should any additional fee be required, the Commissioner is authorized to charge our Deposit Account No. 06-0029 and notify us of the same.

Respectfully Submitted,

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